

ABSTRACT OF THE DISCLOSURE

A mechanism for replicating and maintaining files in a space-efficient manner is disclosed. In one embodiment, a current file is replicated by associating the data blocks of the current file with both the current file and a new file. The new file and the current
5 files are separate and distinct from each other. Data blocks remain shared until the content of one file is modified. Only the data blocks affected by the modification are duplicated. The two files share the unchanged data blocks, but both files are each associated with additional data blocks that reflect the modification. Reference values are used to track how many files are associated with each data block. In another
10 embodiment, a file descriptor is linked to a filename at the request of a user or application. The present invention avoids needless duplication of the same data blocks among copies of a file.